

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Angelo Mascarenhas et al.) Art Unit: Not Yet Accorded
Serial No.: Not Yet Accorded) Examiner: Not Yet Accorded
Filing Date: Not Yet Accorded)
Title: Multi-Junction, Monolithic Solar) Atty. Docket No.: NREL 02-11
Cell with Active Silicon Substrate)

#2

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR § 1.97(b)

Commissioner for Patents
U.S. Patent & Trademark Office
P.O. Box 1450
MS Patent Application
Alexandria, VA 22313-1450

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form 1449 are brought to the attention of the Examiner.

This statement should be considered because it is submitted before the mailing of a first office action of the above-identified application. Accordingly, no fee is due for consideration of the items listed on the enclosed Form 1449.

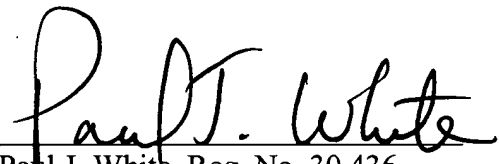
That each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application.

In accordance with 37 C.F.R. § 1.98(a)(2), a copy of each document or other information listed on the enclosed Form 1449 is provided.

No representation is made that a reference is "prior art" within the meaning of 35 USC §§ 102 and 103 and Applicants reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish that the reference(s) are not "prior art." Moreover, Applicants do not represent that a reference has been thoroughly reviewed or that any relevance of any portion of a reference is intended.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form 1449, marked as being considered and initialed by the Examiner, to the undersigned with the next official communication.

Respectfully submitted,


 Paul J. White, Reg. No. 30,436
 Attorney for Applicants

Dated: February.. 3, 2005.

National Renewable Energy Laboratory
 1617 Cole Boulevard
 Golden, CO 80401
 303/384-7575

10/523745

DT 13 Rec'd PCT/PTO 03 FEB 2005

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known

Application Number	Not Yet Accorded
Filing Date	Not Yet Accorded
First Named Inventor	Angelo Mascarenhas
Art Unit	Not Yet Accorded
Examiner Name	Not Yet Accorded
Attorney Docket Number	NREL IR 02-11

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	1	US- 5,912,068	06/15/1999	Jia	
	2	US- 5,981,400	11/09/1999	Lo	
	3	US- 2002/0000584 A1	01/03/2002	Eisenbeiser et al.	
	4	US- 2002/0030246 A1	03/03/2002	Eisenbeiser et al.	
	5	US- 2002/0096683 A1	07/25/2002	Ramdani et al.	
	6	US- 2002/0102418 A1	08/01/2002	Gan et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear
		Country Code ³ Number Kind ⁴ Code ⁵ (if known)			
	1				
	2				
	3				

Examiner Signature	Date Considered
--------------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
				Application Number	Not Yet Accorded
				Filing Date	Not Yet Accorded
				First Named Inventor	Angelo Mascarenhas
				Art Unit	Not Yet Accorded
				Examiner Name	Not Yet Accorded
Sheet	2	of	2	Attorney Docket Number	NREL IR 02-11

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ²
	1	Kaushik et al., "Device characteristics of crystalline epitaxial oxide on silicon," In: 58th Device Research Conference, Denver, 2000, pages 17-20.		
	2	Yu et al., "Epitaxial oxide thin films on Si(001)." J. Vac. Sci. Technol. B. July/August 2000, Vol. 18, No. 4, pages 2139-2145.		
	3	Droopad et al., "Epitaxial oxides on silicon grown by molecular beam epitaxy." Journal of Crystal Growth, 2001, Vol. 227-228, pages 936-943.		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria VA 22313-450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 4450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.